AUTHOR INDEX

VOLUME 51

Aaltonen, Antti S., 49
Abe, Chiyoji, 54
Abell, Tessa J., 607
Achtman, Mark, 268, 286
Adams, L. G., 961
Aihara, Yukoh, 43
Aley, Steven B., 884
Amano, Ken-Ichi, 851
Anacker, Robert L., 653
Anderle, Sonia K., 240, 521
Andersen, Burton R., 514
Anderson, John F., 394
Andrieu, B., 801
Arata, Satoru, 43
Archibald, Frederick S., 631
Arko, Robert J., 431
Arnold, Roland R., 373

Babiuk, L. A., 344
Babu, Jegdish P., 405
Barcinski, Marcello A., 80, 369
Barnes, Robert C., 60
Bar-Ness, Ronit, 932
Barres, J. L., 784
Barrington, Patricia J., 536
Beachey, Edwin H., 362, 405, 414, 529
Benjamin, William H., Jr., 872
Berk, R. S., 687
Bertram, Timothy A., 419
Bessler, Wolfgang G., 233
Bhakdi, S., 314
Bieler, S., 693
Bienz, Kurt A., 147
Billings, Ronald J., 765
Bistoni, F., 668
Blaser, Martin J., 204, 209, 397
Blumberger, Yael, 932
Boonchai, Srichan, 966
Bortner, Carol A., 373
Bouchard, Denis, 909
Bowie, William R., 250
Bowmer, William S., 445
Brade, Helmut, 110
Brade, Lore, 110
Brawner, Diane L., 327, 337
Brennan, Patrick J., 495
Bridges, Nancy B., 431
Briles, David E., 872
Brown, Kathryn M., 744
Brown, Lee R., 765
Brown, Roger R., 240
Bryner, John H., 209
Bullen, John J., 723

Calderone, Richard A., 102
Caldwell, Harlan D., 699
Carbonetti, Nicholas H., 942, 966
Carlström, Ann-Sofie, 919
Cassone, A., 668
Caugant, Dominique, 268
Caulfield, John P., 181
Cedergren, Bertil, 919
Cenci, E., 668
Ceri, Howard, 1
Chandler, Francis W., 431
Chang, Ling Y., 320
Changchawalit, Suchitra, 626
Chiron, J. P., 784
Ciesielski, Carol A., 397
Cihlar, Ronald L., 102
Clark, Bruce L., 187
Clark, Richard L., 240
Clemons, Karl V., 199
Clerc, Philippe, 461
Clyde, Wallace A., Jr., 690
Cohen, Robert E., 378
Colizzi, Vittorio, 712
Collins, James E., 953
Collins-Lech, C., 731
Connor, J., 87
Cooper, Morris D., 425
Costello, Patrick B., 771
Couceiro, José, 224
Coursaget, P., 784
Courtney, Harry S., 414, 529
Cowman, R. A., 440
Cox, Rebecca A., 844
Crispen, Ray G., 514
Cromartie, William J., 240, 521
Cutler, Jim E., 327, 337

Damrow, Todd A., 851
Dankert, Jacob, 294
Danley, David L., 307
de Graaff, Johannes, 972
Del Gallo, Flavia, 712
Dempsey, W. L., 87
Dianzani, Ferdinando, 712
Diffley, Peter, 455
Dinari, Gabriel, 975
Diop-Mar, I., 784
Dolei, Antonina, 712
dos Reis, George A., 369
Dove, C. Robert, 24
Dreyfus, Lawrence A., 736
Drummond, L., 957
Duimstra, Julie R., 953
Duong, Minh-Ngoc, 631

Ebersole, J. L., 507
Echeverria, Peter, 626
Eiras, Adolfo, 224
Eisemann, Christine S., 832
ElDeib, Mohamed M. R., 24
Elleman, Thomas C., 187
Elliott, John A., 31
El-On, Joseph, 704
Emery, David L., 187
Emmrich, Frank, 879
Erb, Peter, 147
Euteneuer, Birgit, 807
Evans, Charles B., 884
Everlith, Karen M., 776

Faine, S., 957
Fairbrother, John M., 10
Falkow, S., 693
Farley, Monica M., 579
Faro, Jose, 224
Farthing, Michael J. G., 661
Feijen, Jan, 294
Feldman, David, 199
Ferrante, Antonio, 177, 607
Filler, Steven J., 348
Fine, D. P., 6
Finlay-Jones, John J., 936
Fitzgerald, R. J., 440
Formal, Samuel B., 975
Francis, David H., 953
Frank, Robert M., 277
Frasch, Carl E., 579
Freudenberg, M. A., 891
Frey, Deirdre E., 507
Frøholm, L. Oddvar, 571
Funk, C. R., 37

Galanos, C., 891
Galloway, D. R., 37
Gander, Rita M., 385
Garber, Gary E., 250
Gariepy, Jean, 320
Garon, Claude F., 699
Germaine, Greg R., 119, 750
Ghadirian, E., 263
Giannini, M. S. H., 838
Gibbs, Paul H., 795
Goebel, W., 314
Goguen, Jon D., 352, 788
Goldstein, Elaine G., 302
Gordon, M. R., 134
Graves, Don C., 125
Gray, Larry D., 964
Green, Floyd A., 771
Gregory, Richard L., 348

Hale, Thomas L., 975
Hammond, Jeffrey S., 723
Hansen, Eric J., 69
Hart, Prue H., 936
Hastie, Annette T., 254
Hasty, David L., 405
Hatch, Thomas P., 788
Hausmann, Ernest, 302
Hazlett, L. D., 687
Heck, Louis W., 115
Hedstrom, R. C., 37
Hennessy, George W., 884
Herscowitz, Herbert B., 483
Heuzenroeder, Michael, 268
Hidore, Michelle R., 547
Higgins, Michael L., 254
Hindahl, Michael S., 94
Hingley, Susan T., 254
Hoberg, Kathryn A., 102
Hogt, André H., 294
Holzer, Timothy J., 514
Hopkins, Janet A., 204
Hoyne, Peter A., 187
Hoffman, Loren H., 579
Hu, Ping C., 690
Hull, R., 693
Hull, S., 693
Hulstaert, C. E., 294
Hunter, D. M., 961
Hutzler, Michael, 594
Hyde, Fred W., 394

Ichinose, Yoshio, 927
Iglewski, Barbara H., 94, 736
Imoto, Masahiro, 43
Ivey, Michael H., 125
Iwanaga, Masaaki, 927

Jann, Barbara, 54
Jann, Klaus, 54
Jarboe, Daniel L., 832
JeanLouis, Yucynthia A., 60
Jensen, Allen E., 419
Jerrells, Thomas R., 355, 832
Joens, L. A., 282
Johnson, Russell C., 394
Jones, Gordon H., 816
Jones, Thomas C., 147
Joseph, Theresa, 699
Josephson, Stephen L., 378
Judes, Herbert, 932

Kadis, Solomon, 501
Kagermeier, Angelika, 490
Kamata, Kunio, 470, 476
Kamisaki, Yoshinori, 320
Kao, Linda, 594
Kaper, J. B., 37
Kasai, Nobuhiko, 43
Kaster, Allan G., 765
Kaufmann, Stefan H. E., 879
Keener, Theresa J., 795
Kelly, James K., 16
Keppler, D., 891
Keusch, Gerald T., 661
Kimura, Alan, 69
Kippuw, Nancy, 972
Klapper, David G., 240
Klein, Jean-Paul, 277
Kongshavn, P. A. L., 263
Kono, Dwight H., 901
Korhonen, Timo K., 268, 618, 966
Koster, Frederick T., 495
Kotani, Shozo, 43
Kreger, Arnold S., 964
Kreier, Julius P., 141, 744
Kueppers, Friedrich, 254
Kume, Katsumi, 563
Kuno, Takayoshi, 320
Kuo, Joseph S.-C., 865
Kurata, Takeshi, 696
Kurimoto, Takao, 969
Kuriyama, Steve M., 193
Kusecek, Barica, 268, 286
Kusumoto, Shoichi, 43, 110
Kwon-Chung, K. J., 218

Lallier, Réal, 10
Lamonde, Louise, 909
Laporta, Marcia Z., 715
Lareo, Isabel, 224
Larivière, Serge, 10
Lebras, J., 801
Lee, Adrian, 536
Lee, Simon W., 586
Leffler, Hakon, 919
Legault, D., 826
Lehtonen, Olli-Pekka J., 49
Levine, Michael J., 302
Linde, Anders, 707
List, Robert H., 653
Lombardi, Giovanna, 712
Lomberg, Helena, 919
London, Jack, 490
Loos, Michael, 807
Luhr, Jordan E., 483
Lupan, David M., 360

MacIntyre, Sheila, 675
Macrina, Francis L., 600
Magnarelli, Louis A., 39

AUTHOR INDEX

VOLUME 51

Aaltonen, Antti S., 49
Abe, Chiyoji, 54
Abell, Tessa J., 607
Achtman, Mark, 268, 286
Adams, L. G., 961
Aihara, Yukoh, 43
Aley, Steven B., 884
Amano, Ken-Ichi, 851
Anacker, Robert L., 653
Anderle, Sonia K., 240, 521
Andersen, Burton R., 514
Anderson, John F., 394
Andrieu, B., 801
Arata, Satoru, 43
Archibald, Frederick S., 631
Arko, Robert J., 431
Arnold, Roland R., 373

Babiuk, L. A., 344
Babu, Jegdish P., 405
Barcinski, Marcello A., 80, 369
Barnes, Robert C., 60
Bar-Ness, Ronit, 932
Barres, J. L., 784
Barrington, Patricia J., 536
Beachey, Edwin H., 362, 405, 414, 529
Benjamin, William H., Jr., 872
Berk, R. S., 687
Bertram, Timothy A., 419
Bessler, Wolfgang G., 233
Bhakdi, S., 314
Bieler, S., 693
Bienz, Kurt A., 147
Billings, Ronald J., 765
Bistoni, F., 668
Blaser, Martin J., 204, 209, 397
Blumberger, Yael, 932
Boonchai, Srichan, 966
Bortner, Carol A., 373
Bouchard, Denis, 909
Bowie, William R., 250
Bowmer, William S., 445
Brade, Helmut, 110
Brade, Lore, 110
Brawner, Diane L., 327, 337
Brennan, Patrick J., 495
Bridges, Nancy B., 431
Briles, David E., 872
Brown, Kathryn M., 744
Brown, Lee R., 765
Brown, Roger R., 240
Bryner, John H., 209
Bullen, John J., 723

Calderone, Richard A., 102
Caldwell, Harlan D., 699
Carbonetti, Nicholas H., 942, 966
Carlström, Ann-Sofie, 919
Cassone, A., 668
Caugant, Dominique, 268
Caulfield, John P., 181
Cedergren, Bertil, 919
Cenci, E., 668
Ceri, Howard, 1
Chandler, Francis W., 431
Chang, Ling Y., 320
Changchawalit, Suchitra, 626
Chiron, J. P., 784
Ciesielski, Carol A., 397
Cihlar, Ronald L., 102
Clark, Bruce L., 187
Clark, Richard L., 240
Clemons, Karl V., 199
Clerc, Philippe, 461
Clyde, Wallace A., Jr., 690
Cohen, Robert E., 378
Colizzi, Vittorio, 712
Collins, James E., 953
Collins-Lech, C., 731
Connor, J., 87
Cooper, Morris D., 425
Costello, Patrick B., 771
Couceiro, José, 224
Coursaget, P., 784
Courtney, Harry S., 414, 529
Cowman, R. A., 440
Cox, Rebecca A., 844
Crispen, Ray G., 514
Cromartie, William J., 240, 521
Cutler, Jim E., 327, 337

Damrow, Todd A., 851
Dankert, Jacob, 294
Danley, David L., 307
de Graaff, Johannes, 972
Del Gallo, Flavia, 712
Dempsey, W. L., 87
Dianzani, Ferdinando, 712
Diffley, Peter, 455
Dinari, Gabriel, 975
Diop-Mar, I., 784
Dolei, Antonina, 712
dos Reis, George A., 369
Dove, C. Robert, 24
Dreyfus, Lawrence A., 736
Drummond, L., 957
Duimstra, Julie R., 953
Duong, Minh-Ngoc, 631

Ebersole, J. L., 507
Echeverria, Peter, 626
Eiras, Adolfo, 224
Eisemann, Christine S., 832
ElDeib, Mohamed M. R., 24
Elleman, Thomas C., 187
Elliott, John A., 31
El-On, Joseph, 704
Emery, David L., 187
Emmrich, Frank, 879
Erb, Peter, 147
Euteneuer, Birgit, 807
Evans, Charles B., 884
Everlith, Karen M., 776

Faine, S., 957
Fairbrother, John M., 10
Falkow, S., 693
Farley, Monica M., 579
Faro, Jose, 224
Farthing, Michael J. G., 661
Feijen, Jan, 294
Feldman, David, 199
Ferrante, Antonio, 177, 607
Filler, Steven J., 348
Fine, D. P., 6
Finlay-Jones, John J., 936
Fitzgerald, R. J., 440
Formal, Samuel B., 975
Francis, David H., 953
Frank, Robert M., 277
Frasch, Carl E., 579
Freudenberg, M. A., 891
Frey, Deirdre E., 507
Frøholm, L. Oddvar, 571
Funk, C. R., 37

Galanos, C., 891
Galloway, D. R., 37
Gander, Rita M., 385
Garber, Gary E., 250
Gariepy, Jean, 320
Garon, Claude F., 699
Germaine, Greg R., 119, 750
Ghadirian, E., 263
Giannini, M. S. H., 838
Gibbs, Paul H., 795
Goebel, W., 314
Goguen, Jon D., 352, 788
Goldstein, Elaine G., 302
Gordon, M. R., 134
Graves, Don C., 125
Gray, Larry D., 964
Green, Floyd A., 771
Gregory, Richard L., 348

Hale, Thomas L., 975
Hammond, Jeffrey S., 723
Hansen, Eric J., 69
Hart, Prue H., 936
Hastie, Annette T., 254
Hasty, David L., 405
Hatch, Thomas P., 788
Hausmann, Ernest, 302
Hazlett, L. D., 687
Heck, Louis W., 115
Hedstrom, R. C., 37
Hennessy, George W., 884
Herscowitz, Herbert B., 483
Heuzenroeder, Michael, 268
Hidore, Michelle R., 547
Higgins, Michael L., 254
Hindahl, Michael S., 94
Hingley, Susan T., 254
Hoberg, Kathryn A., 102
Hogt, André H., 294
Holzer, Timothy J., 514
Hopkins, Janet A., 204
Hoyne, Peter A., 187
Hoffman, Loren H., 579
Hu, Ping C., 690
Hull, R., 693
Hull, S., 693
Hulstaert, C. E., 294
Hunter, D. M., 961
Hutzler, Michael, 594
Hyde, Fred W., 394

Ichinose, Yoshio, 927
Iglewski, Barbara H., 94, 736
Imoto, Masahiro, 43
Ivey, Michael H., 125
Iwanaga, Masaaki, 927

Jann, Barbara, 54
Jann, Klaus, 54
Jarboe, Daniel L., 832
JeanLouis, Yucynthia A., 60
Jensen, Allen E., 419
Jerrells, Thomas R., 355, 832
Joens, L. A., 282
Johnson, Russell C., 394
Jones, Gordon H., 816
Jones, Thomas C., 147
Joseph, Theresa, 699
Josephson, Stephen L., 378
Judes, Herbert, 932

Kadis, Solomon, 501
Kagermeier, Angelika, 490
Kamata, Kunio, 470, 476
Kamisaki, Yoshinori, 320
Kao, Linda, 594
Kaper, J. B., 37
Kasai, Nobuhiko, 43
Kaster, Allan G., 765
Kaufmann, Stefan H. E., 879
Keener, Theresa J., 795
Kelly, James K., 16
Keppler, D., 891
Keusch, Gerald T., 661
Kimura, Alan, 69
Kippuw, Nancy, 972
Klapper, David G., 240
Klein, Jean-Paul, 277
Kongshavn, P. A. L., 263
Kono, Dwight H., 901
Korhonen, Timo K., 268, 618, 966
Koster, Frederick T., 495
Kotani, Shozo, 43
Kreger, Arnold S., 964
Kreier, Julius P., 141, 744
Kueppers, Friedrich, 254
Kume, Katsumi, 563
Kuno, Takayoshi, 320
Kuo, Joseph S.-C., 865
Kurata, Takeshi, 696
Kurimoto, Takao, 969
Kuriyama, Steve M., 193
Kusecek, Barica, 268, 286
Kusumoto, Shoichi, 43, 110
Kwon-Chung, K. J., 218

Lallier, Réal, 10
Lamonde, Louise, 909
Laporta, Marcia Z., 715
Lareo, Isabel, 224
Larivière, Serge, 10
Lebras, J., 801
Lee, Adrian, 536
Lee, Simon W., 586
Leffler, Hakon, 919
Legault, D., 826
Lehtonen, Olli-Pekka J., 49
Levine, Michael J., 302
Linde, Anders, 707
List, Robert H., 653
Lombardi, Giovanna, 712
Lomberg, Helena, 919
London, Jack, 490
Loos, Michael, 807
Luhr, Jordan E., 483
Lupan, David M., 360

MacIntyre, Sheila, 675
Macrina, Francis L., 600
Magnarelli, Louis A., 39

Makino, Souichi, 470, 476, 696
Maldonado, Marcela S., 369
Maltha, Jaap C., 642
Mann, Raymond E., 653
Marchitto, Kevin S., 168
Marconi, P., 668
Mashimo, Jun-Ichi, 43
Matzner, Patrick, 495
Maudsley, James R., 501
Maurelli, Anthony T., 461
Mayberry, William R., 501
Mazor, Yardena, 932
Mbawuike, Innocent N., 483
McArthur, Hamish A. I., 1
McCoy, Donald W., 865
McDonald, Peter J., 936
McGhee, Jerry R., 348
McGraw, Patricia A., 425
McNabb, Scott J. N., 125
McRae, William B., 115
McVeigh, Treasa, 675
Melly, M. Ann, 425, 579
Mendonça-Previato, Lucia, 369
Meyers, Gwyneth L., 16
Michalek, Suzanne M., 348
Mietzner, Timothy A., 60
Mikx, Frans H. M., 642
Millar, Stephen J., 302, 378
Miller, Edward J., 115
Miller, Richard D., 373
Minion, F. Chris, 352
Moll, Albrecht, 286
Monji, Nubuo, 865
Montaraz, J. A., 961
Moon, M., 687
Morahan, P. S., 87
Morihara, Kazuyuki, 115
Morse, Stephen A., 60
Moser, Irmgard, 54
Mosley, R. Lee, 844
Mounier, Joelle, 461
Mouton, Christian, 909
Muchmore, H. G., 6
Murad, Ferid, 320
Murayama, Somay Y., 470, 696
Murphy, Juneann W., 547, 556, 844
Myrvik, Q. N., 134

Nabavi, Nasrin, 556
Nagahama, Masahiro, 927
Nakai, Toyotsugu, 563
Nakasone, Noboru, 927
Nano, Francis E., 699
Nawa, Yukifumi, 213
Nawrot, Richard J., 859
Nealon, Timothy J., 529
Nelson, Kenrad E., 514
Nilsson, Bertil, 919
Norgard, Michael V., 168
Norton, Jerry D., 455
Nuessen, M. E., 282
Nulsen, Mary F., 936
Nziramasanga, Pasipanodya, 360

Obenauf, S. D., 440
Ochman, Howard, 268
Ogasawara, Minoru, 901
Ogier, Joelle A., 277
O'Hanley, Peter, 320
Ohashi, Norio, 948
Ohmann, H. Bielefeldt, 344
Okuda, Kenji, 43
O'Rourke, Jani L., 536
Ørskov, Frits, 54, 268
Ørskov, Ida, 54, 268
Osen, Eric G., 586
Owen, Peter, 675
Owhashi, Makoto, 213

Packer, Beryl J., 141
Pai, Chik H., 16
Parent, Raymond, 909
Parker, Charlotte D., 24
Parrisius, J., 314
Parry, Stephen H., 966
Pavia, Charles S., 365
Pavlovskis, O. R., 37
Pedersen, J. S., 957
Pere, Auli, 618
Pereira, Miercio E. A., 661
Perez-Perez, Guillermo I., 204, 209
Piccolella, Enza, 712
Pluschke, Gerd, 286
Polakoff, Josephine, 307
Posey, Brenda S., 872
Previato, Lúcia M., 80
Proctor, Eileen M., 250
Puccetti, P., 668
Pucci, Michael J., 600

Reeves, Michael W., 431
Regueiro, Benito José, 224
Reijntjens, Frans M. J., 642
Relyveld, E. H., 784
Rhen, Mikael, 618
Rhodes, J. C., 218
Rietschel, Ernst T., 110
Rodrigues, Maurício M., 80
Rosenberg, Mel, 932
Roth, M., 314
Rowe, Bernard, 626
Rubinstein, Ethan, 932
Ryter, Antoinette, 461

Saito, Hajime, 157, 163
Sakai, Takashi, 470, 476, 696
Sakurai, Jun, 927
Salit, Irving E., 648
Salmon, D., 801
Samuelson, John C., 181
Sansonetti, Philippe J., 461
Sartor, R. Balfour, 521
Sasakawa, Chihiro, 470, 476, 696
Sato, Katsumasa, 157, 163
Sawata, Akira, 563
Scaletsky, Isabel C. A., 715
Schär, Gertrud, 199
Schauf, Victoria, 514
Schmitz, Silvie, 54
Schnur, Lionel F., 704
Schoolnik, Gary, 320
Schulman, Seymour, 859
Schwab, John H., 240, 521
Schwartzman, Joseph D., 760
Scott, E. N., 6
Seeliger, H. P. R., 314
Selander, Robert K., 268
Selland-Grossling, Coleen K., 168
Seoane, Rafael, 224
Seriwatana, Jitvimol, 626
Shafer, William M., 60
Shiba, Tetsuo, 43, 110
Shimamoto, Tetsuo, 43
Shryock, Thomas, 254
Silva, M. Lourdes M., 715
Silverblatt, Fredric J., 193
Simonovic, R., 801
Simpson, W. Andrew, 405, 414, 529
Smith, D. J., 507
Smyth, Cyril J., 626
Sohnle, Peter G., 731
Sokol, Pamela A., 896
Somerfield, S. D., 263
Sommer, Pascal, 277
Sowa, B. A., 961
Spencer, Lyn K., 936
Spitalny, George L., 355
Splitter, Gary A., 776
Stäb, Karin, 233
Stebbins, Max R., 865
Stephens, David S., 579
Stevens, David A., 199
Stewart, David J., 187
Stewart, Michael J., 859
Stimpson, Stephen A., 240
Stinson, Murray W., 378
Störkel, Stephan, 807
Stover, E. Price, 199
Straley, Susan C., 445
Strugnell, R. A., 957
Stuart, Simon, 268
Suzuki, Mikio, 969
Svanborg-Edén, Catharina, 919

Tachibana, Chikanori, 969
Takada, Haruhiko, 43
Takata, I., 134
Tamura, Akira, 948
Tanabe, Masao, 927
Taubman, M. A., 507
Taylor, David N., 626
Taylor, Diane W., 884
Tellefson, Lois M., 119, 750
Tenhunen, Jukka, 618
Tenovuo, Jorma, 49
Terrell, Timothy G., 816
Teuscher, Cory, 495
Tew, John G., 600
Thomas, Virginia L., 385
Thong, Y. H., 177
Toh, B. H., 957
Tomalty, Lewis, 648
Tomioka, Haruaki, 157, 163
Trabulsi, Luiz R., 715
Tranum-Jensen, J., 314
Trust, Trevor J., 536
Tsuruhara, Takashi, 948
Tung, Kenneth S. K., 495
Tuohimaa, Pentti, 49
Turco, Jenifer, 355
Turcotte, R., 826
Turnbough, Charles L., Jr., 872
Twohig, Jane, 626

Umland, Edith, 495
Urakami, Hiroshi, 948

Väisänen-Rhen, Vuokko, 268, 618, 966
Vanderberg, Jerome P., 859
Van Winkelhoff, Arie J., 972
Vecchiarelli, A., 668
Veum, Trygve L., 24
Vilde, J. L., 801
Vilja, Pekka, 49
Vismara, Daniela, 712
Volkman, A., 87
Vordermeier, Martin, 233

Waag, David M., 851
Wagner, David K., 731
Waldman, Scott A., 320
Walker, William S., 788
Wang, Wen-lan L., 397
Ward, C. Gillon, 723
Washington, Othello, 975
Watanabe, Takashi, 157, 163
Watanabe, Takehiko, 969
Waters, Ruth V., 816
Way, Alice W., 586
Wedege, Elisabeth, 571
Weinbaum, George, 254
Weiss, Jerrold, 594
Welkos, Susan L., 795
White, Arnold A., 24
Whitfield, Christopher, 1
Whitney, Anne M., 597
Wiedbrauk, Danny L., 653
Wikström, Maude, 707
Williams, Jim C., 851
Williams, Peter H., 942, 966
Williams, W. F., 957
Winkler, Herbert H., 355
Winn, Washington C., Jr., 31
Winter, A. J., 961
Witztum, Avital, 704
Wolters-Lutgerhorst, M. L., 642
Woods, Donald E., 896
Worley, Mark A., 125
Wu, A. M., 961

Xavier, Márcia T., 80

Yamamoto, Koichiro, 927
Yanagihara, Donna, 495
Yang, S. P., 455
Yoshikawa, Masanosuke, 470, 476, 696
Yoshimura, Hiroyuki, 43
Yother, Janet, 788
Yu, David T. Y., 901
Yvonnet, B., 784

Zinn, Gene M., 24

SUBJECT INDEX
VOLUME 51

Abscesses
  neutrophil activity, 936
Acanthamoeba culbertsoni
  mononuclear leukocytes, 607
    neutrophil-mediated killing, 607
Acute-phase serum
  erythrophagocytosis, 141
Adherence
  cell surface hydrophobicity, 932
    coagulase-negative staphylococci, 294
  epithelial cells, 642
  lysozyme, 750
    oral treponemes, 642
  plasmids, 715
    poly(ethylenepropylene), 294
  S. marcescens, 932
  S. mutans, 750
Adhesins
  genes
    characterization, 693
    E. coli, 693
Aerobactin
  E. coli, 942
  E. coli extraintestinal isolates, 966
  iron metabolism, 942
    mediation of iron uptake, 966
  virulence, 942
Affinity purification
  S. aureus toxic shock syndrome toxin, 431
African trypanosomiasis
  immunity, 455
    proteins, 455
    resistance, 455
Agglutinin
  salivary glycoprotein, 405
  S. mutans, 405
Alginate
  heparin-binding lectin, 1
  P. aeruginosa, 1
Anion-exchange chromatography
  E. coli, 385
    monoclonal antibodies, 385
    pilus characterization, 385
Anthrax
  B. anthracis, 795
  pathogenesis, 795
Antibacterial activity
  iron metabolism, 723
  K. pneumoniae, 723
  plasma, 723
  polymorphs, 723
Antigens
  antigen GP-25, 369
  C. albicans, 327, 337
  cell surface determinants, 327, 337
  colonization factor, 626
  dexamethasone, 712
  diarrhea, 10
  E. coli, 10, 54, 626
  E. coli lipopolysaccharide, 286
  fimbrial antigen 1C, 54
  fimbrial antigen F165, 10
  HLA-B27, 901
  K. pneumoniae, 901
  L. mexicana subsp. *amazonensis*, 80
  macrophage migration enhancement factor, 134
  monoclonal antibodies, 54, 286
  Mycoplasma spp., 687
  proteins, 687
  R. rickettsii
    heterogeneity, 653
    monoclonal antibodies, 653
  R. tsutsugamushi polypeptides
    characterization, 948
    migration, 948
  subgrouping, 286
  synthetic lipid A antigen, 43
  T cells, 369
  T. cruzi, 369
  variability, 327
Antimicrobial factors
  infant saliva, 49
  S. mutans, 49
Anti-*Vibrio vulnificus* cytolysin antibodies
  detection, 964
  pathogenesis, 964
Arthritis
  HLA-B27 antigens, 901
  K. pneumoniae, 901
Astrocytes
  gamma interferon, 147
  T. gondii, 147

Bacillus anthracis
  pathogenesis, 795
  resistance, 795
Bacteroides endodontalis
  serotypic characterization, 972
Bacteroides gingivalis
  bone metabolism, 302
  lipopolysaccharides, 302
    serotypic characterization, 909
Bacteroides nodosus
  E. coli, 187
  pilin gene expression, 187
  plasmids, 187
Bacteroides spp.
  oral microorganisms
    antibody levels, 507
    immune response, 507
Blood groups
  attachment, 919
  E. coli, 919
  receptor specificity, 919
Bone metabolism
  B. gingivalis, 302
  lipopolysaccharides, 302
  modulation, 302
Bordetella bronchiseptica
  pili
    characterization, 586
    purification, 586
Bordetella pertussis
  H. influenzae type b, 865
  outer membrane components, 865
  polyribosyl ribitol phosphate, 865
  polysaccharides, 865
Borrelia burgdorferi
  Lyme disease epidemiology, 394
  pathogenesis, 394
Bovine herpesvirus
  alveolar macrophages, 344
Brucella abortus
  lymphocyte-macrophage collaboration, 776
  monoclonal antibodies, 961
  polysaccharides, 961
  protection, 961

Ca^{2+}-regulated virulence
  Y. pestis, 445
Campylobacter fetus
  heat-stable serogroups, 209
  lipopolysaccharides, 209
Campylobacter jejuni
  intestinal infection, 536
  mouse cecal model, 536
  mucus colonization, 536
Campylobacter spp.
  lipopolysaccharides, 204, 209
Candida albicans
  cell surface determinants, 327, 337
  cerulenin-resistant mutants, 102
  characterization, 327, 337
  inhibition, 668
  macrophages, 668
  monocyte killing, 307
  morphogenesis, 337
  pseudohyphae
    hypochlorous acid/chloramines, 731
    neutrophil killing, 731
  resistance, 307
Capnocytophaga gingivalis
  lectinlike protein
    characterization, 490
    identification, 490
Cardiolipin
  antiphospholipid antibodies, 771
  human anticardiolipin, 771
  syphilis, 771
Caries
  cariogenic microorganisms, 765
    coronal surfaces, 765
  immunoglobulin A, 348
  oral streptococci, 440
  root surfaces, 765
  salivary proteins, 440
    serum antibodies, 348
  S. mutans
    antibody response, 600
    antigens, 600
  ribosomes, 348
Cell surface characteristics
  antigens, 337
  C. albicans, 327, 337
  coagulase-negative staphylococci
    adherence, 294
    poly(ethylenepropylene), 294
  determinants, 327
  M. pulmonis, 352
Cell surface hydrophobicity
  adherence, 932
  S. marcescens, 932
Cell wall polymers
  arthropathic properties, 240
  M. formicicum, 240
  P. acnes, 240
  P. productus, 240
  S. faecium, 240
Cellular immune response
  characterization, 80
  glycoconjugates, 80
  glycolipid I antigen, 495
  L. mexicana subsp. *amazonensis*, 80
  M. leprae, 495
Cercarial glycocalyx
  complement activation, 181
  S. mansoni, 181
Cerulenin-resistant mutants
  C. albicans, 102
Chancre immunity

increased immunoblot reactivity, 957
syphilis, 957
T. pallidum, 957
Chlamydia psittaci
plasmids, 699
Chlamydia trachomatis
plasmids, 699
Chromosomal map position
E. coli genes, 693
P adhesins, 693
Ciliated nasopharyngeal epithelium
damage, 579
N. meningitidis, 579
Ciliostatic factors
P. aeruginosa, 254
rabbit respiratory cilia, 254
Cloning
E. coli, 268
exotoxin A expression, 37
leprosy vaccine, 879
M. leprae, 879
P. aeruginosa, 37
plasmids, 476
S. flexneri
Congo red binding, 476
virulence, 476
T cells, 879
urinary tract infection, 268
Coagulase-negative staphylococci
adherence, 294
cell surface characteristics, 294
poly(ethylenepropylene), 294
Coccidioides immitis
collagenolytic activity, 360
Collagens
C. immitis, 360
cleavage, 115
collagenolytic activity, 360
P. aeruginosa elastase, 115
Colonic mucus
HeLa cells, 975
S. flexneri
aggregation, 975
invasion, 975
Colonization factor antigens
E. coli, 626
plasmids, 626
Colony-stimulating factor
S. japonicum, 213
T lymphocytes, 213
Complement
activation
cercarial glycocalyx, 181
S. mansoni, 181
alternative pathway activation, 6
metabolic burst stimulation, 801
P. falciparum, 801
S. schenckii, 6
Congo red binding
S. flexneri, 461, 470, 476
virulence, 461, 470, 476
Corynebacterium parvum
immunomodulators, 87
L. monocytogenes, 87
resistance, 87
Coxiella burnetii
Q fever, 851
vaccines, 851
C1q
macrophages, 807
phagocytosis, 807
S. minnesota, 807
Critical micelle concentrations
biological activity, 414
lipoteichoic acids, 414
Cryptococcus neoformans
cell-mediated growth inhibition, 556
characterization, 547
clearance, 547
immunoadsorption, 844
natural killer cells, 547, 556
T-cell suppressor, 844
virulence indicators
encapsulation, 218
melanin formation, 218
Cutaneous leishmaniasis
L. enrietii, 704
protection, 704
suppression, 838
UV irradiation, 838
Cytochalasin D
L. pneumophila, 31
macrophages, 31
Cytolysin antibodies
anti-*V. vulnificus*
detection, 964
pathogenesis, 964
Cytotoxicity
plasmids, 788
Y. pestis, 788
Y. pseudotuberculosis, 788

Dexamethasone
interferons, 712
interleukins, 712
microbial antigens, 712
natural killer cells, 712
Diarrhea
E. coli, 10, 16
fimbrial antigen F165, 10
verotoxin, 16
Diphtheria-tetanus-pertussis-polio vaccine
immune response, 784
Disulfide-reducing agents
E. coli, 24
enterotoxins, 24
DNase activity
characterization, 352
identification, 352
M. pulmonis, 352

Endotoxins
galactosamine-induced sensitization, 891
macrophages, 891
Entamoeba histolytica
oxidants, 263
susceptibility, 263
Enterobacteriaceae
Bacteroides spp., 972
B-cell activation, 233
lipopolysaccharides, 204
mitogenesis, 233
OmpF protein, 233
Enterochelin
E. coli, 942
iron metabolism, 942
virulence, 942
Enterotoxins
disulfide-reducing agents, 24
E. coli, 24, 320
intestinal receptors, 320
particulate guanylate cyclase, 320
Epitopes
immunoresponse suppression, 224
N. meningitidis, 224
phosphorylcholine, 224

Erythrophagocytosis
effects of
acute-phase serum, 141
erythrocyte-bound immunoglobulins, 141
macrophages, 141
P. berghei, 141
Escherichia coli
adhesins, 693
aerobactin, 966
antigen subgrouping, 286
attachment, 919
B-cell activation, 233
blood group, 919
B. nodosus, 187
clonal analysis, 268
colonization factor antigens, 626
diarrhea, 10, 16
disulfide-reducing agents, 24
enterotoxins, 320
fimbrial antigen 1C, 54
fimbrial antigen F165, 10
genes, 693
guanylate cyclase, 320
heat-stable enterotoxins, 24
hemorrhagic colitis, 953
intestinal receptors, 320
iron metabolism, 942, 966
lipopolysaccharide modulation, 594
lipopolysaccharides, 286
monoclonal antibodies, 54
neutrophil protein, 594
O2:K1 serotype, 268
OmpF protein, 233
pathogenesis, 16, 268
P fimbriae
characterization, 618
immunoprecipitation, 618
phagocytosis, 193
pilin gene expression, 187
plasmids, 187, 626, 715
receptor specificity, 919
Sereny test, 696
siderophores, 942
synthetic lipid A
antigenicity, 110
immunogenicity, 110
Tamm-Horsfall glycoprotein, 193
type I fimbriae, 193
verotoxin production, 16
virulence, 942, 953
Estradiol
P. brasiliensis, 199
protein binding, 199
Exotoxins
cloning, 37
exotoxin A expression, 37
P. aeruginosa, 37

Ferripyochelin binding protein
characterization, 896
P. aeruginosa, 896
Fibronectin
complexes with lipoteichoic acid, 529
degradation, 707
group A streptococci, 529
oral microorganisms, 707
penicillin, 529
Fimbriae
antigen F165, 10
E. coli, 618
P fimbriae
analysis, 618

immunoprecipitation, 618
Fimbrial antigen 1C
E. coli, 54
hemagglutination, 54
monoclonal antibodies, 54
Fimbrial antigen F165
diarrhea, 10
E. coli, 10
hemagglutination, 10
Fluoride
inhibition of glucose uptake, 119
S. mutans, 119

Galactosamine
lipopolysaccharides, 891
macrophages, 891
sensitization to endotoxin, 891
Genetic characterization
pathogenesis, 872
S. typhimurium, 872
Giardia lamblia
surface lectin, 661
Glucose uptake
fluoride inhibition, 119
S. mutans, 119
Glycocalyx
cercarial glycocalyx
complement activation, 181
S. mansoni, 181
Glycoconjugates
cellular immune response, 80
L. mexicana subsp. *amazonensis*, 80
Glycolipids
glycolipid I antigen, 495
M. leprae, 495
Gonococcal lipopolysaccharides
localization, 425
pathogenesis, 425
Granulocytes
colony-stimulating factor, 213
S. japonicum, 213
Group A streptococci
fibronectin-lipoteichoic acid complexes, 529
penicillin, 529
Guanylate cyclase
E. coli, 320
enterotoxins, 320
heat-stable intestinal receptor, 320

Haemophilus influenzae type b
B. pertussis, 865
immunogenicity, 865
lipopolysaccharides, 69
polyribosyl ribitol phosphate, 865
polysaccharides, 865
variations
antigenic, 69
phenotypic, 69
virulence, 69
Haemophilus pleuropneumoniae
characterization
biochemical, 419
morphological, 419
heat-stable hemolytic substance, 563
lipopolysaccharides
characterization, 501
isolation, 501
purification, 501
porcine pulmonary macrophages, 563
virulence, 419
Heat-stable intestinal receptor
E. coli, 320
guanylate cyclase, 320
HeLa cells
colonic mucus, 975
E. coli, 715
plasmid-mediated contact hemolysis, 461
plasmids, 715
S. flexneri,461, 975
vacuole lysis, 461
Hemolysins
V. cholerae
characterization, 927
identification, 927
Hemorrhagic colitis
E. coli, 953
pathogenesis, 953
Heparin-binding lectin
alginate, 1
P. aeruginosa, 1
Hepatitis B vaccine
immune response, 784
Herpesvirus
alveolar macrophage function, 344
HLA-B27 antigens
mimicry by *K. pneumoniae*, 901
Human anticardiolipin
antiphospholipid antibodies, 771
reactivity patterns, 771
syphilis, 771
Human cilia
nasopharyngeal epithelium, 579
N. meningitidis, 579
Hydrophobicity
adherence, 932
S. marcescens, 932

Immune mechanisms
interleukin-2
mechanism, 826
suppression, 826
M. bovis BCG, 826
Immune response
antibody levels, 507
Bacteroides spp., 507
oral microorganisms, 507
Immune serum
metabolic burst stimulation, 801
P. falciparum, 801
Immunization
DTP-polio vaccine, 784
hepatitis B vaccine, 784
immune response to
diphtheria toixid, 784
hepatitis B surface antigen, 784
pertussis, 784
tetanus toxoid, 784
Immunoadsorption
C. neoformans, 844
T cells, 844
Immunogenic proteins
immunoblotting, 250
T. vaginalis, 250
Immunoglobulins
erythrophagocytosis, 141
IgG, 141
IgM, 141
Immunomodulators
C. parvum, 87
L. monocytogenes, 87
monocytes, 87
natural killer cells, 87
resistance, 87
Immunoresponses
N. meningitidis, 224
suppression, 224
Interferons
antirickettsial activity, 355
astrocytes, 147
dexamethasone, 712
IFN-γ, 147, 355
R. prowazekii, 355
T. gondii, 147
Interleukins
dexamethasone, 712
IL-2
mechanisms, 826
suppression, 826
M. bovis BCG, 826
Iron metabolism
aerobactin, 966
antibacterial function
plasma, 723
polymorphs, 723
E. coli, 942, 966
ferripyochelin binding protein, 896
iron uptake, 942
K. pneumoniae, 723
lactoferrin, 373
L. pneumophila, 373
Neisseria spp., 60
N. gonorrheae, 60
P. aeruginosa, 896
proteins, 60
siderophores, 942
virulence, 942

Klebsiella pneumoniae
antibacterial activity
plasma, 723
polymorphs, 723
HLA-B27 antigens, 901
iron metabolism, 723

Lactate dehydrogenase
immunological characterization, 277
lactic bacteria, 277
S. mutans, 277
Lactic bacteria
immunological characterization, 277
lactate dehydrogenase, 277
S. mutans, 277
Lactoferrin
bactericidal effect, 373
L. pneumophila, 373
Lectins
alginate, 1
C. gingivalis, 490
G. lamblia, 661
heparin binding, 1
lectinlike protein
characterization, 490
identification, 490
P. aeruginosa, 1
Legionella pneumophila
cytochalasin D, 31
extracellular protease
characterization, 736
purification, 736
inhibition, 31, 373
iron metabolism, 373
lactoferrin, 373
lipopolysaccharides, 397
macrophages, 31
outer membrane proteins, 94
serogroup specificity, 397
Legionella spp.

outer membrane proteins, 94
Leishmania enrietii
inhibition, 704
Leishmania major
suppression, 838
UV irradiation, 838
Leishmania mexicana subsp. *amazonensis*
antigens, 80
cellular immune response, 80
glycoconjugates, 80
L. donovani, 80
Lipids
cellular immune response, 495
glycolipid I antigen, 495
M. leprae, 495
synthetic *E. coli* lipid A
antigenicity, 110
immunogenicity, 110
synthetic *Salmonella*-type antigen, 43
Lipopolysaccharides
antigen subgrouping, 286
B. gingivalis, 302
bone metabolism, 302
Campylobacter spp., 204
C. fetus, 209
chain length modulation, 594
E. coli, 286, 594
endotoxins, 891
Enterobacteriaceae, 204
galactosamine-induced sensitization, 891
gonococcal LPS
localization, 425
pathogenesis, 425
H. influenzae type b, 69
H. pleuropneumoniae
characterization, 501
isolation, 501
purification, 501
L. pneumophila, 397
LPS-responsive macrophages, 891
macrophages, 807
neutrophil protein, 594
oral microorganisms, 969
P. aeruginosa, 204
phagocytosis, 807
Selenomonas spp., 969
serogroup specificity, 397
S. minnesota, 807
V. cholerae, 204
virulence, 69
Lipoteichoic acids
biological activity, 414
complexes with fibronectin, 529
critical micelle concentration, 414
group A streptococci, 529
penicillin, 529
purification, 378
S. mutans, 378
water-organic solvent systems, 378
Listeria monocytogenes
C. parvum, 87
immunomodulators, 87
listeriolysin production, 314
resistance, 87
toxins, 314
Listeriolysin
L. monocytogenes, 314
production, 314
Lyme disease
B. burgdorferi epidemiology, 394
pathogenesis, 394
Lymphocytes
B. abortus, 776
cross-reactive responses, 832
lymphocyte-macrophage collaboration, 776
protective immunity, 832
R. conorii, 832
spotted fever rickettsiae, 832
Lymphoid tissue hemorrhage
leukocytes, 521
peptidoglycan-polysaccharide polymers, 521
Lymphokines
antirickettsial activity, 355
colony-stimulating factor, 213
R. prowazekii, 355
S. japonicum, 213
Lysozyme
S. mutans adherence, 750

Macrophages
activation, 744
acute-phase serum, 141
alveolar macrophages
herpesvirus, 344
B. abortus, 776
C. albicans, 668
colony-stimulating factor, 213
C1q, 807
cytochalasin D, 31
endotoxins, 891
enhanced recovery, 483
erythrophagocytosis, 141
function, 483
galactosamine-induced sensitization, 891
H. pleuropneumoniae, 563
immunoglobulins, 141
lipopolysaccharides, 807, 891
L. pneumophila, 31
lymphocyte-macrophage collaboration, 776
M. bovis BCG, 483
migration enhancement factor, 134
morphology, 483
P. berghei malaria, 141
phagocyte-plasmodium interaction, 744
phagocytosis
attachment, 807
ingestion, 807
porins, 807
protection, 668
purified protein derivative, 134
resistance, 87
S. japonicum, 213
S. minnesota, 807
Malaria
erythrophagocytosis, 141
P. berghei, 141
Malarial antigen
monoclonal antibody assay, 884
P. yoelii, 884
Melanin
C. neoformans, 218
encapsulation, 218
virulence indicator, 218
Meningococcal infection
mouse model, 648
mucosal invasion, 648
Meningococcal vaccine
human antibody response, 571
immunoblotting, 571
Metabolic burst
neutrophils, 801
P. falciparum, 801
stimulation
complement, 801
immune serum, 801
Methanobacterium formicicum
cell wall polymers, 240
Mitogenesis
B-cell activation, 233
E. coli, 233
OmpF protein, 233
Monoclonal antibodies
anion-exchange chromatography, 385
antigen subgrouping, 286
antirickettsial activity, 355
assay
malarial antigen, 884
P. yoelii, 884
B. abortus, 961
E. coli, 54, 286, 385
fimbrial antigen 1C, 54
H. influenzae type b, 69
molecular specificities, 168
P. carinii
characterization, 125
development, 125
penetration-enhancing factor, 760
pilus characterization, 385
protection, 961
P. yoelii, 884
rhoptries, 760
R. prowazekii, 355
R. rickettsii, 653
T. gondii, 760
T. pallidum, 168
Monocytes
C. albicans, 307
killing, 307
resistance, 87
Mononuclear leukocytes
A. culbertsoni, 607
neutrophil-mediated killing, 607
Morphogenesis
C. albicans, 337
cell surface antigenic variability, 337
Mucosal invasion
mouse model, 648
N. meningitidis, 648
Mucus colonization
C. jejuni, 536
intestinal infection, 536
mouse cecal model, 536
Muramyl dipeptides
uveitis induction, 816
Mutants
C. albicans, 102
cerulenin resistance, 102
purified protein derivative, 134
Mycobacterium bovis
interleukin-2
mechanisms, 826
suppression, 826
macrophage migration enhancement factor, 134
macrophages
characterization, 483
recovery enhancement, 483
Mycobacterium leprae
cellular immune response, 495
glycolipid I antigen, 495
O_2^- generation, 514
phagocytes, 514
susceptibility to
human oligodendroglial cells, 157, 163
mouse Schwann cells, 157, 163
T-cell clones, 879

vaccines, 879
Mycoplasma pneumoniae
antigenic determinants, 687
attachment proteins, 687
Mycoplasma spp., 687
Mycoplasma pulmonis
DNase activity
characterization, 352
identification, 352
Mycoplasma spp.
antigenic determinants, 687
attachment proteins, 687

Naegleria spp.
migration patterns, 177
pathogenesis, 177
Natural killer cells
activity, 547
adoptive transfer, 547
antibody levels, 556
cell-mediated growth inhibition, 556
clearance, 547
C. neoformans, 547, 556
dexamethasone, 712
resistance, 87
Neisseria gonorrhoeae
antigenic reactivity, 60
iron-regulated protein, 60
Neisseria meningitidis
ciliated nasopharyngeal epithelium, 579
epitopes, 224
harmful effects, 579
human antibody response, 571
immunoresponse suppression, 224
mucosal invasion, 648
phosphorylcholine, 224
vaccines, 571
Neisseria spp.
oxygen toxicity, 631
superoxide dismutase, 631
Neutrophils
abscess-bearing mice, 936
A. culbertsoni, 607
C. albicans pseudohyphae, 731
E. coli, 594
hypochlorous acid/chloramines, 731
lipopolysaccharide modulation, 594
metabolic burst stimulation, 801
neutrophil-mediated killing, 607
peripheral blood, 936
peritoneal exudates, 936
P. falciparum, 801
protection, 731
proteins, 594
Normal swine sera
bactericidal effect, 282
T. hyodysenteriae, 282
Nuclease activity
characterization, 352
identification, 352
M. pulmonis, 352

O_2^- generation
M. leprae, 514
phagocytes, 514
Oligodendroglial cells
M. leprae, 157
mouse Schwann cells, 157
phagocytosis
ability, 157
mechanisms, 163
OmpF protein
B-cell activation, 233
E. coli, 233
Opsonic antibodies
polylysine, 362
streptococcal M protein, 362
Oral microorganisms
Bacteroides spp.
antibody levels, 507
immune response, 507
fibronectin degradation, 707
lipopolysaccharides, 969
Selenomonas spp., 969
Oral treponemes
epithelial cells
damage, 642
detachment, 642
Outer membrane components
B. pertussis, 865
H. influenzae type b, 865
immunogenicity, 865
polysaccharides, 865
Outer membrane proteins
Legionella spp., 94
L. pneumophila, 94
Oxidants
E. histolytica, 263
susceptibility, 263
Oxygen toxicity defenses
Neisseria spp., 631
superoxide dismutase, 631

P adhesins
genes
characterization, 693
E. coli, 693
Paracoccidiodes brasiliensis
estradiol, 199
protein binding, 199
Pathogenesis
B. anthracis, 795
B. burgdorferi, 394
B. gingivalis, 909
C. jejuni, 536
H. pleuropneumoniae, 419
intestinal infections, 536
Naegleria spp.
migration patterns, 177
serotypic characterization, 909
S. typhimurium, 872
virulence genes, 872
Penetration-enhancing factor
inhibition, 760
rhoptry-specific monoclonal antibodies, 760
T. gondii, 760
Penicillin
fibronectin-lipoteichoic acid complexes, 529
group A streptococci, 529
Peptidoglycans
lymphoid tissue hemorrhage, 521
polysaccharides, 521
Peptostreptococcus productus
cell wall polymers, 240
Peripheral blood
neutrophil activity, 936
Peritoneal exudates
neutrophil activity, 936
PEV vaccine
characterization, 675
P. aeruginosa, 675
Phagocytes
macrophage activation, 744
M. leprae, 514
O_2^- generation, 514
phagocyte-plasmodium interaction, 744
Phagocytosis
C. albicans, 731
E. coli, 193
glial cells, 157, 163
M. leprae, 157, 163
Tamm-Horsfall glycoprotein, 193
Phosphoenolpyruvate
fluoride inhibition, 119
S. mutans, 119
Phospholipid antibodies
cardiolipin, 771
syphilis, 771
Phosphorylcholine
carrier-specific immunosuppression, 224
epitopes, 224
N. meningitidis, 224
Pili
anion-exchange chromatography, 385
B. bronchiseptica
heterogeneity, 586
purification, 586
characterization, 385
E. coli, 385
monoclonal antibodies, 385
Pilin gene
expression
B. nodosus, 187
E. coli, 187
plasmids, 187
Plasmids
adherence, 715
antigens, 626
cloning, 470
colonization factor antigens, 626
Congo red binding, 470
C. psittaci, 699
C. trachomatis, 699
cytotoxicity, 788
drug resistance, 715
E. coli, 626, 715
molecular characterization, 699
pilin gene expression, 187
plasmid-mediated contact hemolysis, 461
S. flexneri, 461, 470, 476
virulence, 470, 476, 788
Y. pestis, 788
Y. pseudotuberculosis, 788
Plasmodium berghei
antibodies, 859
erythrophagocytosis, 141
macrophages, 141
malaria, 141
sporozoites, 859
Plasmodium falciparum
metabolic burst stimulation, 801
neutrophils, 801
Plasmodium yoelii
malarial antigen, 884
monoclonal antibody assay, 884
Pneumocystis carinii
monoclonal antibodies
characterization, 125
development, 125
Poly(ethylenepropylene)
coagulase-negative staphylococci
adherence, 294
cell surface, 294
Polymorphonuclear leukocytes
metabolic burst stimulation, 801
P. falciparum, 801

Polypeptides
antigens, 948
R. tsutsugamushi
characterization, 948
migration, 948
Polysaccharides
B. abortus, 961
B. pertussis, 865
H. influenzae type b, 865
immunogenicity, 865
lymphoid tissue hemorrhage, 521
monoclonal antibodies, 961
peptidoglycans, 521
polyribosyl ribitol phosphate, 865
Porins
macrophages, 807
phagocytosis, 807
S. minnesota, 807
Propionibacterium acnes
cell wall polymers, 240
Proteases
L. pneumophila
characterization, 736
purification, 736
Proteins
African trypanosomiasis
immunity, 455
resistance, 455
bactericidal/permeability-increasing protein, 594
B-cell activation, 233
caries, 440
C. gingivalis, 490
E. coli, 233
estradiol binding, 199
ferripyochelin binding protein, 896
immunoblotting, 250
iron regulation, 60
lectinlike protein
characterization, 490
identification, 490
Legionella spp., 94
L. pneumophila, 94
Neisseria spp., 60
OmpF, 233
P. aeruginosa, 896
P. berghei, 859
P. brasiliensis, 199
polylysine, 362
restriction, 455
salivary glycoprotein, 405
salivary proteins
cross-reactivity, 440
oral streptococci, 440
S. mutans, 405
sporozoites, 859
streptococcal M protein, 362
T. brucei, 455
T. vaginalis, 250
virulence genes, 445
Y. pestis, 445
Pseudomonas aeruginosa
alginate, 1
ciliostatic factors, 254
collagen cleavage, 115
elastase, 115
exotoxin A
expression, 37
regulation, 37
ferripyochelin binding protein, 896
gene cloning, 37
heparin-binding lectin, 1
iron metabolism, 896
lipopolysaccharides, 204
ocular receptor, 687
PEV vaccine, 675
rabbit respiratory cilia, 254
vaccines, 675
Purified protein derivative
macrophage migration enhancement factor, 134
M. bovis, 134

Q fever
C. burnetii, 851
vaccines, 851

Rabbit respiratory cilia
P. aeruginosa ciliostatic factors, 254
Receptor specificity
attachment, 919
blood groups, 919
E. coli, 919
Rickettsia conorii
lymphocyte responses, 832
protective immunity, 832
Rickettsiae
antirickettsial activity, 355
gamma interferon, 355
lymphokines, 355
monoclonal antibodies, 355
R. prowazekii, 355
Rickettsia prowazekii
inhibition, 355
interferons, 355
Rickettsia rickettsii
antigenic heterogeneity, 653
monoclonal antibodies, 653
virulence, 653
Rickettsia tsutsugamushi
antigenic components, 948
polypeptides
characterization, 948
migration, 948

Saliva
anionic proteins
biological properties, 440
caries, 440
antibody systems, 49
antimicrobial factors, 49
immunoglobulin A, 348
infants, 49
serum antibodies, 348
S. mutans ribosomes, 348
Salivary glycoprotein
agglutination, 405
characterization, 405
isolation, 405
S. mutans, 405
Salmonella minnesota
C1q, 807
lipopolysaccharides, 807
phagocytosis, 807
porins, 807
Re mutant, 807
synthetic *Salmonella*-type antigen, 43
Salmonella typhimurium
pathogenesis, 872
virulence genes, 872
Schistosoma japonicum
colony-stimulating factor, 213
granulocytes, 213
macrophages, 213
T lymphocytes, 213
Schistosoma mansoni
cercarial glycocalyx, 181
complement activation, 181
Schwann cells
human oligodendroglial cells, 157
M. leprae, 157
phagocytic ability, 157
Selenomonas spp.
lipopolysaccharides
characterization, 969
Sereny test
E. coli, 696
shigellae, 696
virulence, 696
Serotypic characterization
B. endodontalis, 972
B. gingivalis, 909
crossed immunoelectrophoresis, 909
E. coli, 618
human antibody response, 571
immunoprecipitation, 618
lipopolysaccharides, 397
L. pneumophila, 397
meningococcal vaccine, 571
P fimbriae, 618
Serratia marcescens
adherence, 932
cell surface hydrophobicity, 932
pigmented strains, 932
Shigella flexneri
cloning, 476
colonic mucus, 975
HeLa cells
aggregation, 975
invasion, 975
multiplication within HeLa cells, 461
plasmid alteration
Congo red binding, 470, 476
virulence, 470, 476
plasmid-mediated contact hemolysis, 461
vacuole lysis, 461
Shigella spp.
Sereny test, 696
virulence, 696
Sialic acid
adherence, 687
P. aeruginosa ocular receptor, 687
Siderophores
E. coli, 942
iron metabolism, 942
virulence, 942
Sporothrix schenckii
complement pathway activation, 6
host defenses, 6
Sporozoites
antibodies, 859
invasion, 859
P. berghei, 859
Spotted fever
lymphocytes, 832
protective immunity, 832
R. conorii, 832
^{89}Sr
immunomodulator-induced reistance, 87
Staphylococci
adherence, 294
cell surface characteristics, 294
Staphylococcus aureus
pathogenesis, 431
toxic shock syndrome toxin, 431
Streptococcal M protein
characterization, 362
opsonic antibodies, 362

Streptococcus faecium
cell wall polymers, 240
Streptococcus mutans
adherence, 750
agglutination, 405
antigens
antibody response, 600
antimicrobial factors, 49
caries, 765
endogenous phosphoenolpyruvate potential, 119
fluoride inhibition, 119
glucose uptake, 119
immunoglobulin A, 348
immunological characterization, 277
infant saliva, 49
lactate dehydrogenase, 277
lipoteichoic acid, 378
lysozyme treated hydroxyapatite, 750
saliva, 750
ribosomal preparations, 348
salivary glycoprotein, 405
serum antibodies, 348
Superoxide dismutase
Neisseria spp., 631
oxygen toxicity, 631
Syphilis
anticardiolipin reactivity patterns, 771
antiphospholipid antibodies, 771
chancre immunity, 957
increased immunoblot reactivity, 957
T. pallidum, 365, 957
transfer of resistance, 365

Tamm-Horsfall glycoprotein
E. coli, 193
killing, 193
phagocytosis, 193
T cells
clones
leprosy vaccine, 879
M. leprae, 879
C. neoformans, 844
immunoadsorption, 844
proliferative response
antigen GP-25, 369
characterization, 369
T. cruzi, 369
T lymphocytes
B. abortus, 776
colony-stimulating factor, 213
lymphocyte-macrophage collaboration, 776
S. japonicum, 213
Tooth surfaces
cariogenic microorganisms, 765
microflora, 765
Toxic shock syndrome
S. aureus, 431
toxin 1
affinity purification, 431
pathologic effects, 431
Toxins
B. anthracis, 795
diarrhea, 16
E. coli, 16
listeriolysin, 314
L. monocytogenes, 314
S. aureus, 431
toxic shock syndrome toxin, 431
verotoxin, 16
Toxoids
diphtheria, 784
immune response, 784
tetanus, 784
Toxoplasma gondii
astrocytes, 147
cultivation in vitro, 147
gamma interferon, 147
penetration-enhancing factor, 760
rhoptry-specific monoclonal antibodies, 760
Treponema denticola
adherence, 642
pathogenesis, 642
Treponema hyodysenteriae
normal swine sera, 282
virulence, 282
Treponema pallidum
chancre immunity, 957
increased immunoblot reactivity, 957
monoclonal antibodies, 168
syphilis, 365, 957
transfer of resistance, 365
virulence, 168
Treponema vincentii
adherence, 642
pathogenesis, 642
Trichomonas vaginalis
immunoblotting, 250
immunogenic proteins, 250
Trypanosoma brucei
immunity, 455
proteins, 455
resistance, 455
Trypanosoma cruzi
T-cell proliferative response
antigen GP-25, 369
characterization, 369
Trypanosomiasis
immunity, 455
proteins, 455
resistance, 455

Urinary tract infection
attachment, 919
blood groups, 919
E. coli, 919
Uveitis
induction, 816
muramyl dipeptides, 816

Vaccines
C. burnetii, 851
DTP-polio, 784
hepatitis B, 784
human antibody response, 571
immune response, 784
leprosy, 879
M. leprae, 879
N. meningitidis, 571
P. aeruginosa PEV, 675
Q fever, 851
T-cell clones, 879
Verotoxins
diarrhea, 16
E. coli, 16
production, 16
Vibrio cholerae
hemolysins
characterization, 927
identification, 927
lipopolysaccharides, 204
Vibrio vulnificus
antibodies to cytolysin, 964
pathogenesis, 964
Virulence
C. neoformans, 218
E. coli, 696, 953
encapsulation, 218
hemorrhagic colitis, 953
melanin formation, 218
plasmids, 788
R. rickettsii, 653
Sereny test, 696
shigellae, 696
T. hyodysenteriae, 282
Y. pestis, 788
Y. pseudotuberculosis, 788
Virulence genes
Ca^{2+} regulation, 445
outer membrane proteins, 445
Y. pestis, 445

Water-organic solvent systems
lipoteichoic acid purification, 378
S. mutans, 378

Yersinia pestis
outer membrane protein structural genes, 445
plasmid-determined cytotoxicity, 788
virulence genes, 445
Y. pseudotuberculosis, 788
Yersinia pseudotuberculosis
plasmid-determined cytotoxicity, 788
Y. pestis, 788